Technical Service Bulletin

SUBJECT:			No: TSB–12–13–006
ECM REPROGRAMMING FOR ENGINE SYSTEM SERVICE REQUIRED ILLUMINATED – REVISED			DATE: November, 2012 ◀
			MODEL: See below
CIRCULATE TO:	[ ] GENERAL MANAGER	[ ] PARTS MANAGER	[X] TECHNICIAN
[X] SERVICE ADVISOR	[X] SERVICE MANAGER	[X] WARRANTY PROCESSOR	[ ] SALES MANAGER

This bulletin supercedes TSB–11–13–007, issued June, 2011, to correct the subject, include Lancer Evolution SST, Lancer and Lancer Sportback Ralliart models, clarify instructions for performing mechanical checks and change Warranty Information. Changes are italicized and indicated by ◀ .

PURPOSE

Some affected vehicles may display ⚠ ENGINE SYSTEM SERVICE REQUIRED on the MID *and DTC P0012 may be recorded in ECM memory, but the MIL is not illuminated*. An incorrect parameter in the judgment criteria may cause mis–detection of a fault even though the timing chain elongation rate remains within the specified allowance. ◀

This TSB provides a procedure to reprogram the ECM, confirm the oil control valve and timing chain are not at fault, and reset the timing chain learned value. ◀

IMPORTANT: *If an affected vehicle has a Malfunction Indicator Lamp (MIL) illuminated with DTCs listed in the ECM memory (before reprogramming), diagnose and repair those DTCs per the service manual before reprogramming.* ***DO NOT*** *reprogram the ECM until the reason(s) for DTCs being set is corrected.* ◀

AFFECTED VEHICLES

2008–2011 Lancer Evolution built before January 27, 2011 ◀
2009–2011 Lancer Ralliart built before January 27, 2011
2009–2011 Lancer Sportback Ralliart built before January 27, 2011

REQUIRED OPERATIONS

NOTE: This revision affects only written procedures in the following instructions. Affected vehicles that were previously reprogrammed for this condition DO NOT require additional reprogramming. ◀

1. Confirm MUT–III software contains the latest reprogramming database.
2. Reprogram the ECM with new software per the Reprogramming Procedure.
3. *Visually check timing chain elongation using procedures described in Group 11 – Engine, of the service manual. If the timing chain is elongated, replace it and the oil pump chain.* ◀

⚠ CAUTION ***If the timing chain is elongated, replace ONLY the chain as described in step 3, above. DO NOT replace any other related parts (e.g. timing chain tensioner, VVT sprocket, chain guide, etc.) unless they are significantly worn or damaged.*** ◀

4. *Reset the Timing Chain Learned Value as described in Group 00 – General — Timing Chain Maintenance, of the service manual.* ◀
5. Perform “Erase and Read All DTCs.”
6. Perform a test drive to confirm DTCs do not return.
7. *If ⚠ ENGINE SYSTEM SERVICE REQUIRED* is displayed in the MID, *remove the MIVEC oil control valve(s) and inspect for foreign material.* ◀

Continued
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The information contained in this bulletin is subject to change. For the latest version of this document, go to the Mitsubishi Dealer Link, MEDIC, or the Mitsubishi Service Information website *(www.mitsubishitechinfo.com)*.

The following equipment is needed to reprogram the ECM.

- MEDIC laptop computer with A/C power adaptor – 520924 or MIT547708.
- VCI (Vehicle Communication Interface) – MB991824.
- MUT–III main harness 'A' (blue DLC connector) – MB991910.
- USB 2.0 cable – MB991827.
- "Engine Compartment/Control Module" label – p/n MSSF024G00.
- *Reprogramming Database N11101 or higher* ◀
  - *MEDIC 3 update at 085 or higher.* ◀
  - *Standalone MUT–III laptop with Reprogramming CD 2/11 installed.* ◀

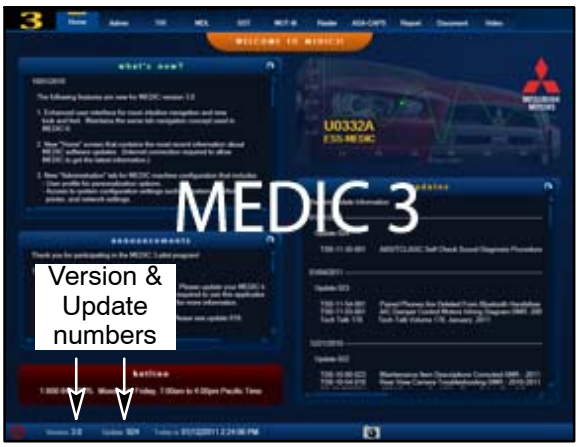
ECM REPROGRAMMING CHART

MODEL	CURRENT PART NO.	DATA NO.	DISPLAY ON MUT–III AFTER REPROGRAMMING	
			New Part No.	New S/W Part No.
08 NAS Lancer Evolution 4B11 T/C 5M/T	**1860A979**	**1862B354**	**1860A979**	**1860A97908**
09 NAS Lancer Evolution 4B11 T/C 5M/T	**1860B180**	**1862B355**	**1860B180**	**1860B18004**
10 NAS Lancer Evolution 4B11 T/C 5M/T	**1860B306**	**1862B356**	**1860B306**	**1860B30602**
11 NAS Lancer Evolution 4B11 T/C 5M/T	**1860B474**	**1862B357**	**1860B474**	**1860B47403**
08 NAS Lancer Evolution 4B11 T/C TC–SST	***1860A980***	***1862B440***	***1860A980***	***1860A98009*** ◀
09 NAS Lancer Evolution 4B11 T/C TC–SST	***1860B181***	***1862B441***	***1860B181***	***1860B18104*** ◀
10 NAS Lancer Evolution 4B11 T/C TC–SST	***1860B307***	***1862B443***	***1860B307***	***1860B30702*** ◀
11 NAS Lancer Evolution 4B11 T/C TC–SST	***1860B475***	***1862B445***	***1860B475***	***1860B47503*** ◀
09 NAS Lancer/Lancer Sportback 4B11 T/C TC–SST	***1860B106***	***1862B442***	***1860B106***	***1860B10604*** ◀
10 NAS Lancer/Lancer Sportback 4B11 T/C TC–SST	***1860B308***	***1862B444***	***1860B308***	***1860B30802*** ◀
11 NAS Lancer/Lancer Sportback 4B11 T/C TC–SST	***1860B485***	***1862B446***	***1860B485***	***1860B48503*** ◀

REPAIR PROCEDURE

NOTE: Reprogramming the ECM with the latest database (i.e.11101) includes all past and current reprogramming for TSBs on affected vehicles. You do not need to reprogram the ECM for each TSB.

1. Check the underside of the hood to verify there is no “Authorized Modification” label (see page 12 for example) previously installed to indicate this reprogramming has already been completed. If a label is present and the “ROM ID #” on the label matches the “New S/W Part No.” in the ECM Reprogramming Chart on page 2, the ECM is at the latest level and reprogramming is not necessary.

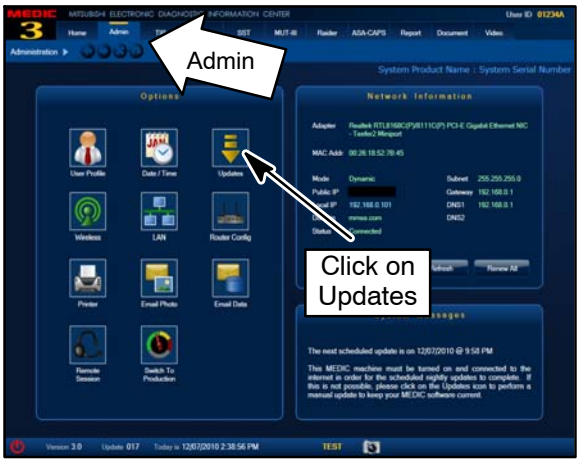


For MEDIC 3 users only: (MUT–III users go to step 4)

2. Verify your MEDIC 3 is at version 3.1 and at update **085** or higher.

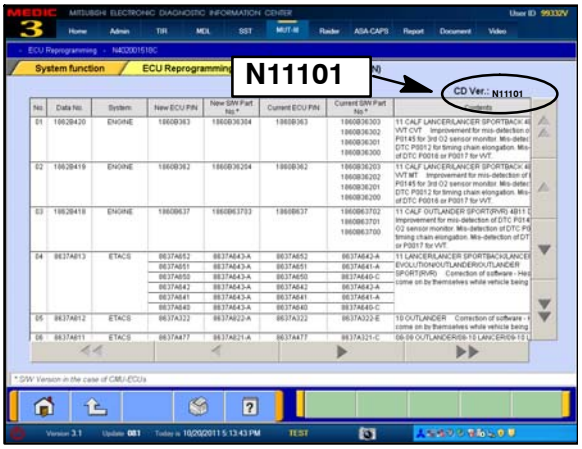
   If your **MEDIC–3 update is at least 085**, continue with the Reprogramming Procedure on page 5.

   If your **MEDIC 3 update is below 085**, update your MEDIC 3 as follows.



3. Select the MEDIC 3 Admin tab and click on “Updates.”

4. If the Medic Update screen advises updates are available, click the “Begin” button. After the updates are complete, **GO TO THE REPROGRAMMING PROCEDURE ON PAGE 5.**



5. **<u>Standalone MUT–III Scan Tool Viewer (STV) ONLY: (MEDIC 3 USERS go to the Programming Procedure on page 5)</u>**. Verify that your MUT–III has the most current version of the reprogramming database:

   a. From the MUT–III Main Page:

   - Select “Special Function”
   - Select “ECU Reprogramming”
   - Select “Database File Display–CAN”
   - Confirm the database number displayed at the top right of the chart is **N11101**.

   (1) If the database number displayed on your MUT–III is N11101 or greater, continue to the Reprogramming Procedure on page 6.

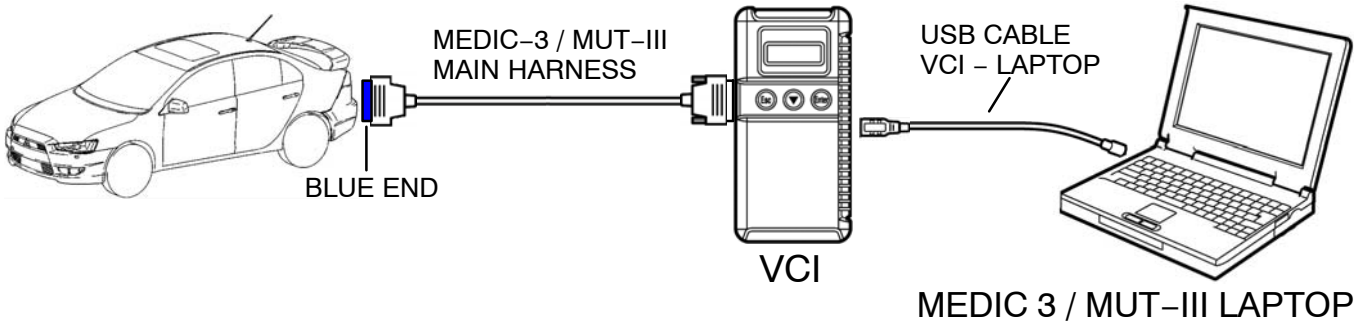
   (2) If the database number displayed on your MUT–III is lower than N11101, locate the Yellow MUT–III Reflash CD 02/11 (or higher) and follow the instructions on the CD label to update your MUT–III.

REPROGRAMMING PROCEDURE

CONNECT A BATTERY CHARGER TO THE VEHICLE'S BATTERY DURING THE REPROGRAMMING PROCEDURE. DO NOT ALLOW THE BATTERY CHARGER TO TIME OUT. BATTERY VOLTAGE (AS MEASURED AT THE BATTERY POSTS WITHOUT ELECTRICAL LOAD) MUST BE KEPT AT 12.4V OR HIGHER IN ORDER TO REPROGRAM THE ECM. MEASURE THE BATTERY VOLTAGE AND CHARGE AS NECESSARY.

NOTE: VCI Stand–alone reprogramming is not available for this procedure. The laptop and the VCI must remain connected for the entire procedure.

Connect the equipment as follows:

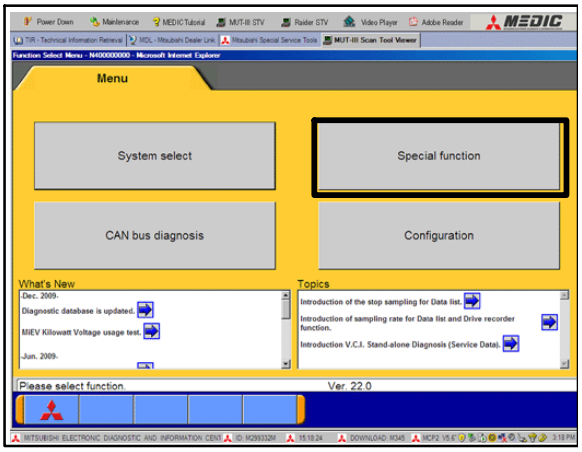


- Turn the laptop computer on. If you're running on battery power and the charge indicator in the lower right hand corner of the screen does not show a full charge, it is recommended that either the laptop battery be charged prior to beginning, or that reprogramming be completed with the A/C power adaptor connected to the laptop.
- Connect the USB cable to the VCI.
- When the laptop displays the MUT–III main screen, connect the USB cable to the laptop.
- Connect the MUT–III main harness with the blue DLC connection to the VCI.
- Connect the blue connector of the MUT–III main harness to the vehicle's data link connector.
- Turn the VCI power switch ON. Verify that the indicator lamp in the upper right corner of the screen is green.

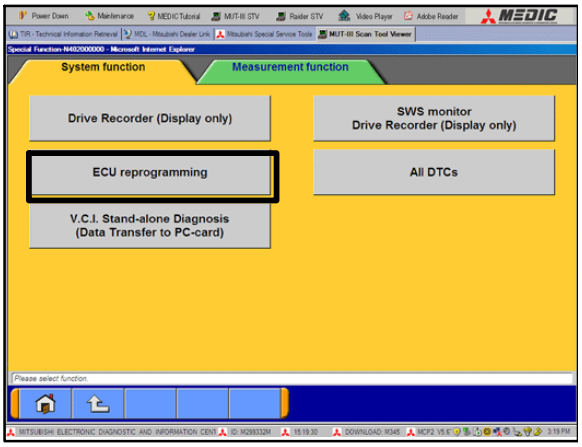
⚠ CAUTION **DO NOT DISTURB THE HARNESS CABLES OR CONNECTIONS. INTERRUPTION DURING THE REPROGRAMMING PROCESS COULD CAUSE THE CONTROL UNIT TO LOSE DATA OR PREVENT FUTURE REPROGRAMMING. IF THE USB CABLE IS DISCONNECTED DURING THIS PROCEDURE, A WARNING MESSAGE WILL DISPLAY.**

ECM Reprogramming

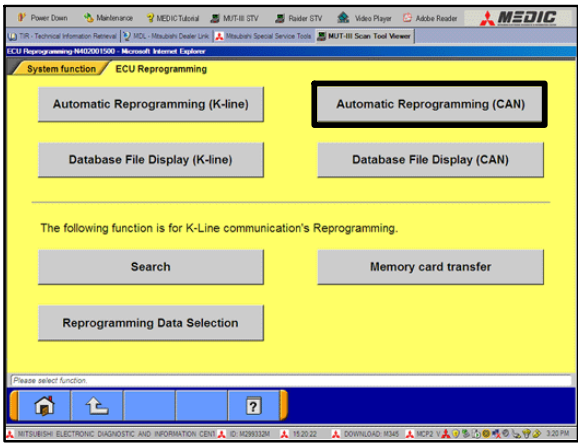
1. Conduct the following steps to reprogram the ECM.
   a. Turn the ignition switch to the ON position. If the vehicle is equipped with the F.A.S.T. System, the transmitter must remain in the vehicle for the entire procedure.



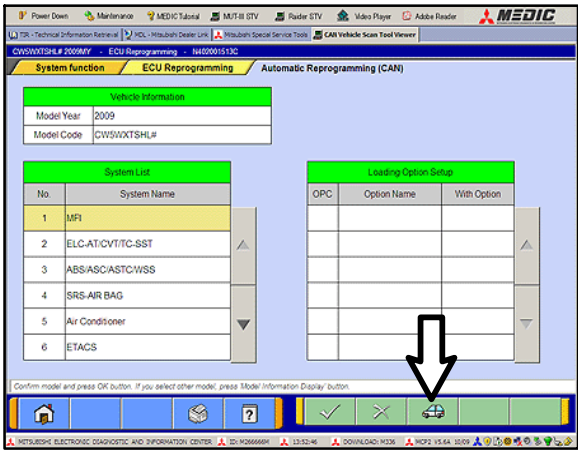
   b. If using MEDIC–III, from the main page, click the MUT–III STV icon at the top center of the screen.
   c. Select “Special Function.”



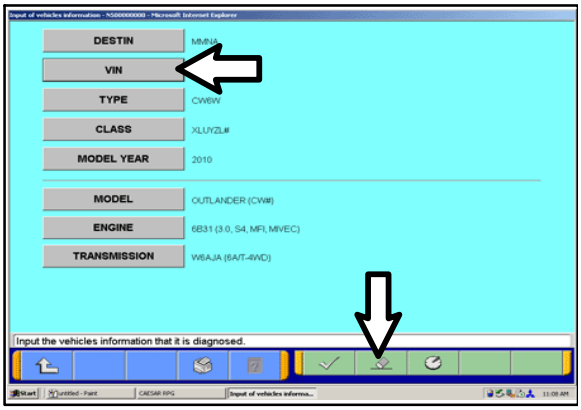
   d. Select “ECU reprogramming.”



   e. Select “Automatic Reprogramming (CAN).”

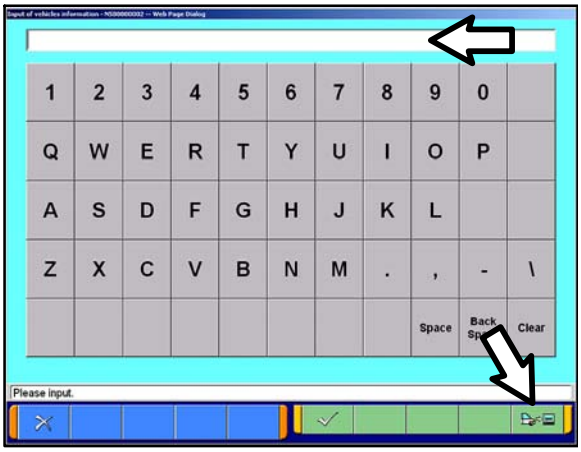


f. Click the car icon at the bottom of the page.



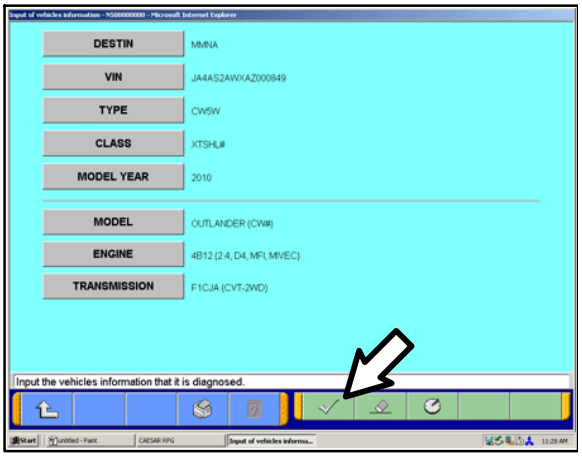
g. If the VIN or vehicle description displayed does not match the vehicle you are working on, click the eraser icon at the bottom of the page.

Select VIN by clicking the VIN button.

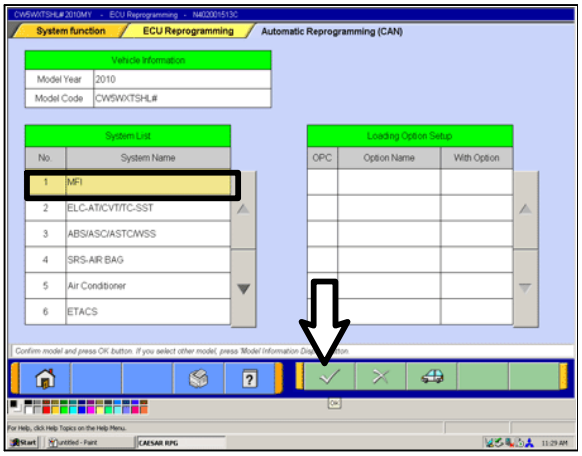


h. Click the icon in the lower RH corner of the screen to have MUT–III automatically read the VIN. If a message appears saying that the VIN cannot be input automatically, manually type the 17 digit VIN into the VIN field at the top of the page.

Make sure the VIN is correct and click the check mark.

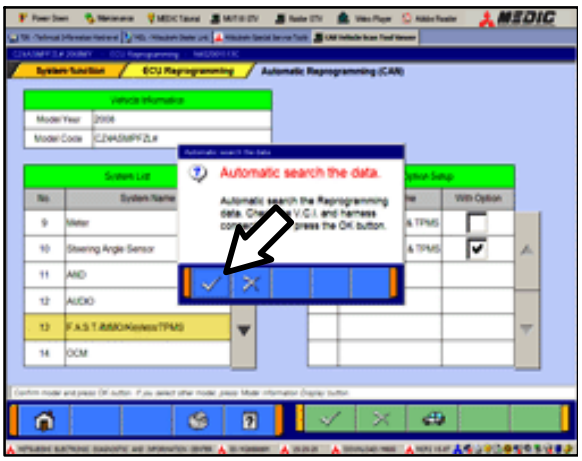


i. Confirm that all data matches the vehicle and click the check mark at the bottom of the page.



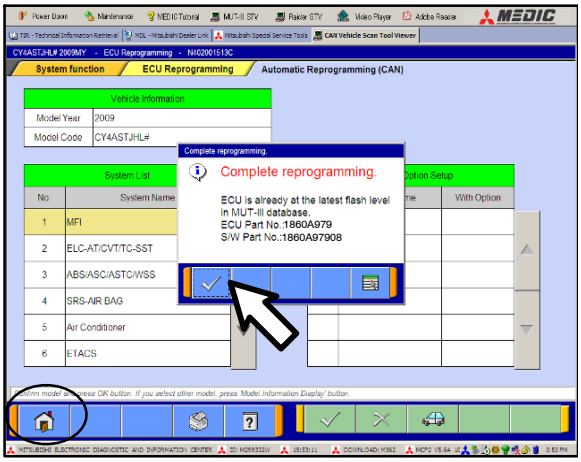
j. MFI should be highlighted as the default. If not, click it to highlight it.

Click the check mark at the bottom of the page.



k. A message will advise you that the system will “Automatic search the data.”

Click the check mark to continue.



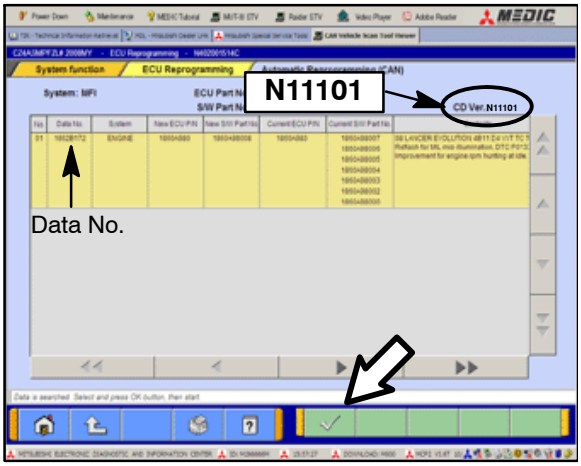
ECM TO LATEST VERSION

If an “Complete Reprogramming” message **does not** appear, continue with step l.

If this message is displayed, the ECM software is already at the most current level. Do not continue with this reprogramming procedure. This TSB does not apply.

Click the check mark to clear the window, then click the Home icon at the lower left corner of the screen to return to the System Select main page.

Turn off the ignition switch and disconnect the MUT–III. Turn off and disconnect the battery charger. Conduct normal diagnosis.



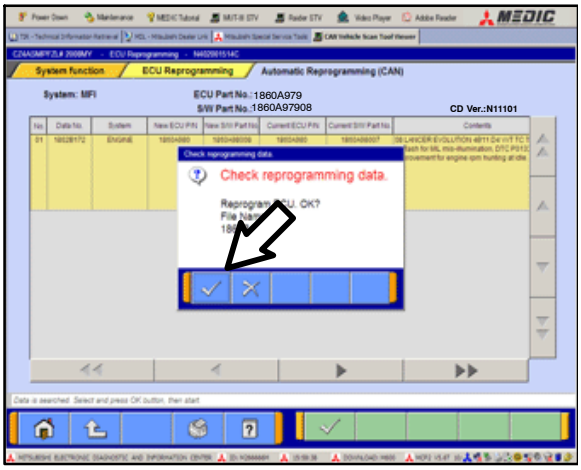
l. The CAN database screen will display.

Confirm the database number at the top right of the table is **N11101** or higher.

If more than one row is displayed in the table, refer to the ECM Reprogramming Chart on page 1 to select the proper Data No. for this procedure and select the appropriate row.

Click the correct row to highlight it.

Click the check mark to continue.

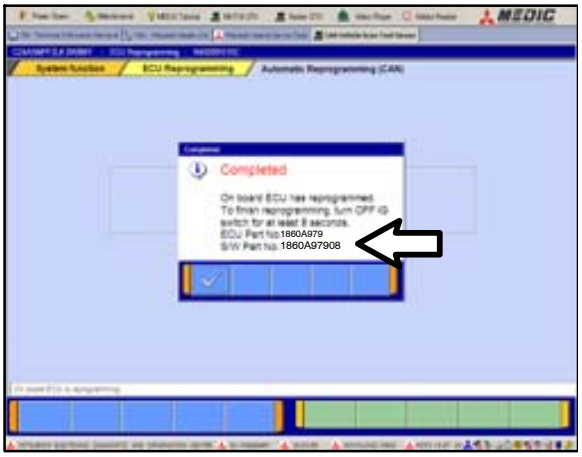


m. A message will ask you to “Check reprogramming data.”

n. Click the check mark to begin reprogramming.

It will take up to 5 minutes for reprogramming to complete.

⚠ CAUTION **The Daytime Running Lights and both the engine and condenser fans will automatically be turned on during reprogramming. Care should be taken to insure nothing gets caught in the moving blades. The radio will be turned off and you will also hear a chime in the interior for a short period of time. These are normal conditions.**

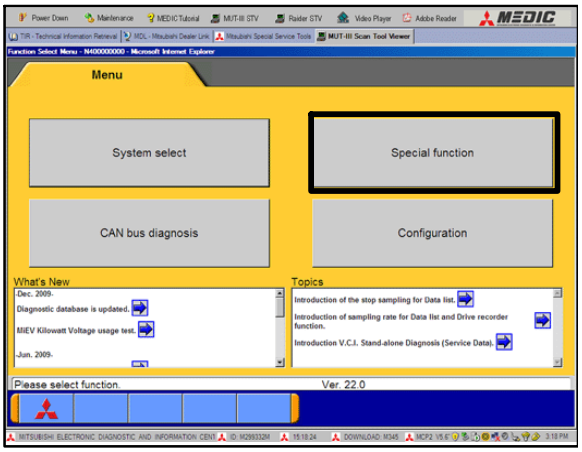

Completed
On board ECU has reprogrammed.
To finish reprogramming, turn OFF IG switch for at least 8 seconds.
ECU Part No.1860A979
S/W Part No.1860A97908

o. This message will display when ECM reprogramming is successfully completed. Confirm the “New S/W P/N” displayed matches the chart at the beginning of this TSB.

p. You will be prompted to turn the ignition switch to the OFF position, wait at least 8 seconds, then turn it back on.

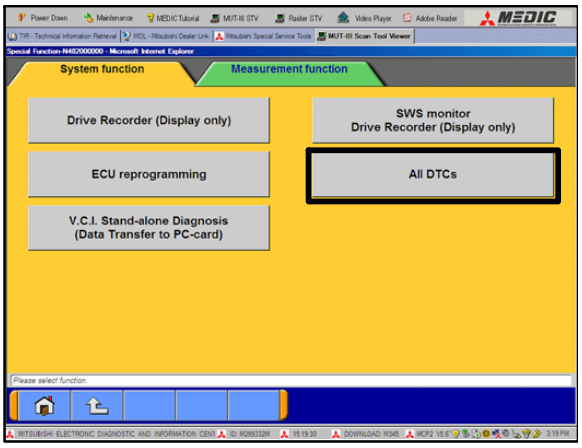
q. Click the check mark and you will be returned to the “ECU Reprogramming” page.

2. Click the Home icon at the lower left corner of the page to return to the MUT–III main page.

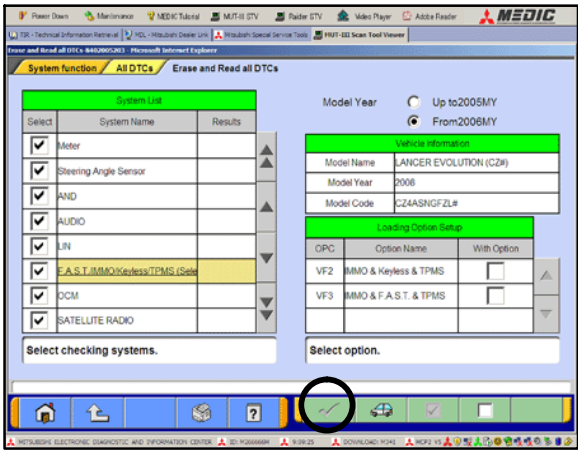


3. Using the MUT–III, check and erase ALL DTCs from all systems as follows.

a. Select “Special Function.”

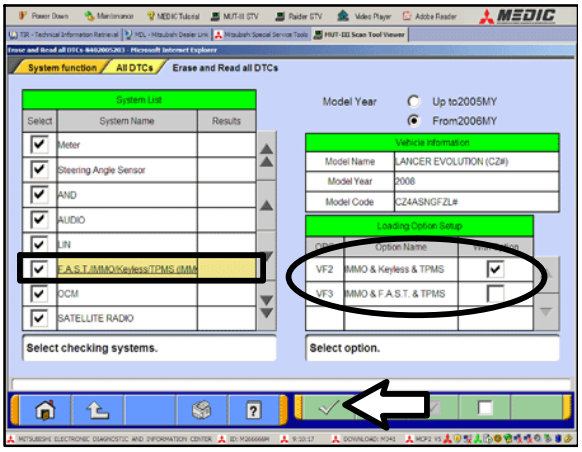


b. Select “All DTCS,” then select “ERASE AND READ ALL DTCS.”



c. The list on the left side of the screen (System List) will have all selections checked. Do not change these selections. DTCs may be set if the vehicle is equipped with options that are unchecked.

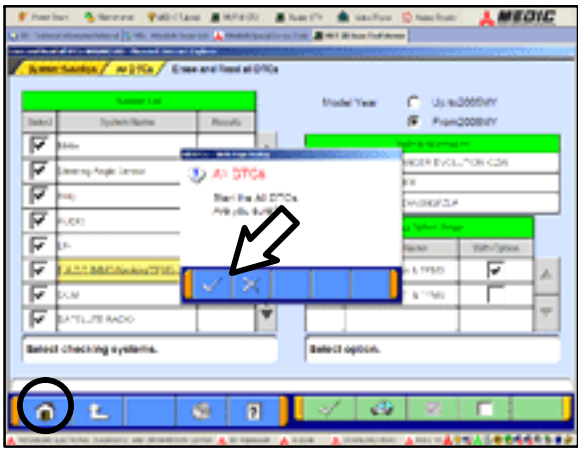
NOTE: At this time, the check mark at the bottom of the page is not highlighted (inactive).



d. In the System List, scroll to and click FAST/IMMOB/KEYLESS/TPMS. In the Loading Option Setup list, check the correct OPC (VF#). This will activate the check mark at the bottom of the page.

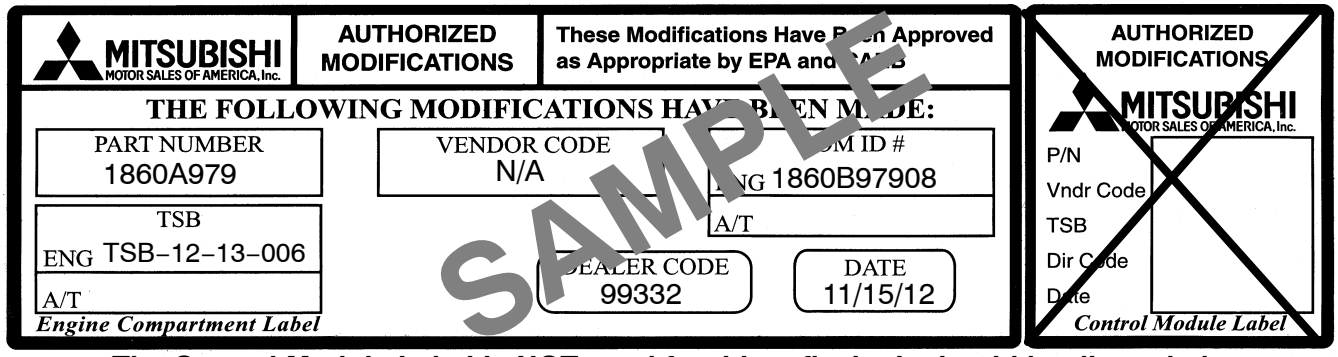
- Vehicles with regular keyless entry (buttons on a multi–function key), select VF2.
- Vehicles with F.A.S.T. key, select VF3.

Click the check mark to continue.



4. A window will display asking you to confirm DTC erasing. Click the check mark for DTC erasing and reading to begin.
5. When DTC erasing is completed, a window will display.
   a. If DTCs return after reprogramming, click the check mark to clear the window. Diagnose and repair per the Service Manual.
   b. If DTCs do not return, click the check mark to clear the window and then click the Home icon in the lower left of the screen to return to the main menu.
6. Turn off the ignition switch and disconnect the MUT–III. Turn off and disconnect the battery charger.

7. Using a ball–point pen, enter the appropriate Engine Control Module (ECM) part number, Software Part Number (ROM ID#), this Technical Service Bulletin number (TSB–12–13–006), your dealer code, and the current date on the Engine Compartment / Control Module Label (p/n MSSF024G00). The Vendor Code is not applicable. The label is available from your facing PDC.



The Control Module Label is NOT used for this reflash. It should be discarded.

8. Carefully remove all dirt and oil from a vacant area near the VECI label on the underside of the hood, and affix the *Engine Compartment Label* (LH side, above) to that area.
9. Test drive the vehicle to confirm proper operation and that the MIL does not illuminate. Diagnose and correct any DTCs that return.

PARTS INFORMATION

Use only the Genuine Mitsubishi Parts listed below.

Description	Model	Part Number
Label, Engine Compartment	All	MSSF024G00

WARRANTY INFORMATION

This bulletin is supplied as technical information only and is not an authorization to repair. If an affected vehicle is reported with the described condition, diagnose the condition, repair as described in this bulletin and submit a normal warranty claim using the following information.

ECM Reprogramming for DTC P0012

Nature Code: 160 *Cause Code: 08B*

Labor Operation No.: 138501 95 *Time Allowance:* 0.3 hr.

Warranty Coverage: Emissions Coverage – Refer to the Superscreen for individual vehicle warranty coverage terms.

Special Warranty Information: Normal warranty procedures apply.

Timing Chain Replacement (if necessary)

Use standard labor operation times

Warranty Coverage: Powertrain Coverage – Refer to the Superscreen for individual vehicle warranty coverage terms.